"It was Hard, But it was Good:" A Qualitative Exploration of Stress-Related Growth in Division I Intercollegiate Athletes

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Recent research suggests that many individuals not only survive, but thrive as a result of life stress and trauma. Both scientific and anecdotal evidence support the notion of psychosocial growth and development following stress in athletes. The purpose of this study was to gain an understanding of stress-related growth (SRG) in Division I intercollegiate athletes. Criterion sampling was used to select athletes who indicated a moderate to large degree of growth on a self-report measure for in-depth interviews. Four dimensions emerged from interviews with 11 athletes: (a) Personal and Sociocultural Context, (b) Disruption, (c) Social Support, and (d) Positive Psychosocial Outcomes. Based on these four dimensions, a conceptual model of SRG was developed. Athletes' struggles and attempts to work through their most difficult sport stressor led them to perceive personal growth in the form of a new life philosophy, self changes, and interpersonal changes. Social support was critical in facilitating athletes' attempts to work through and make meaning from their stressor. The entire SRG process was framed by athletes' life context, including personal characteristics and sociocultural conditions. Sport psychology practitioners should be aware of the possibility for SRG following sport stressors, promote coping strategies aimed at engaging the athlete with theirs stressor, and assist the athletes in developing a strong social support network. Researchers who are interested in conducting future studies on SRG in sport should consider employing prospective quantitative and qualitative designs, and exploring the interaction of multiple simultaneous life events on growth rather than a single stressor.

Keywords: adversity; coping; growth; mixed methods; personal development; stress

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"Looking back it seems to me, all the grief that had to be, left me when the pain was o'er, stronger than I was before." These words were quoted by legendary coach John Wooden in his 2005 book, *Wooden on Leadership* (Wooden & Jamison, 2005, p. 221). Many athletes, including 7-time Tour de France winner Lance Armstrong seem to share Wooden's sentiment about the transformative power of pain and grief. Armstrong has often said that cancer was the driving force that allowed him to succeed both on and off the bike (Armstrong, 2001).

The notion of positive change as a consequence of human suffering has its roots in ancient philosophy and religion (Calhoun & Tedeschi, 2006; Linley & Joseph, 2003). Literary works have emphasized the power of adversity to bring positive change. The influential book, *Man's Search for Meaning* (Frankl, 1963) provided a detailed account of psychiatrist's Victor Frankl's experiences as a prisoner in Nazi concentration camps, and how he was able to find meaning in life despite horrific circumstances. What writers, philosophers, and religious figures have suggested for generations, and athletes such as Wooden and Armstrong have confirmed, social scientists have begun to systematically explore.

Stress-related growth

Stress-related growth (SRG) refers to the positive psychological, social, and spiritual changes that occur in the aftermath of stressful life experiences (Park, Cohen, & Murch, 1996). Although other terms, such as *posttraumatic growth, thriving, perceived benefits, or benefit finding* have been used to describe growth following adversity, SRG and posttraumatic growth (PTG) are the most widely adopted labels. Despite much overlap between the two concepts, Park (2009) recently highlighted the key differences between SRG and PTG. Although both concepts refer to positive changes that occur in response to adversity, they differ with regard to four factors: (a) the severity of the causal event, (b) the

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mechanism of growth, (c) the commonality of occurrence, and (d) the duration of change (Park, 2009). Whereas PTG represents a radical change, and occurs only in response to extremely traumatic events (e.g., death of a loved one, life threatening illness, survivor of a terrorist attack), SRG refers to a less radical, but more commonly experienced positive change in response to life stressors. Furthermore, PTG is a result of individuals' restructuring of their basic life assumptions, while SRG arises out of attempts to make meaning of the stressor. Finally, whereas PTG is proposed as a permanent transformation, individuals who experience SRG may regress toward their former thoughts, beliefs, and behaviours (Park, 2009). Because the athletes in this study were not selected on the basis of having suffered a confirmed trauma, SRG was chosen as the focus of the present investigation.

SRG has been a popular area of study in general psychology over the past 20 years, as researchers and practitioners have begun to embrace a more positive approach to stress and adversity (cf., Seligman & Csikszentmihalyi, 2000). Individuals experiencing adversity ranging from relationship problems (Park et al., 1996) to the death of a loved one (Cadell, Regehr, & Hemsworth, 2003) have reported psychosocial growth due to their as a consequence of their struggles. Although the experience of a traumatic life event may lead to a variety of negative sequelae, researchers have found that up to 90% of individuals report positive changes as a result of their trauma (Calhoun & Tedeschi, 1999). Numerous studies have revealed that individuals' growth experiences can typically be classified into one of three domains: (a) perceived changes in the self (e.g., increased personal strength; Milam, 2006), (b) a changed sense of relationships with others (e.g., greater caring for others; Malinak, Hoyt, & Patterson, 1979), or (c) a changed philosophy of life (e.g., increased spirituality; Parappully, Rosenbaum, van den Daele, & Nzewi, 2002). The three domains align with Tedeschi and Calhoun's (1996) Posttraumatic Growth Inventory (PTGI), which has been widely adopted by growth researchers. A fourth domain centered on a new

awareness of the body has recently been introduced (Hefferon, Grealy, & Mutrie, 2009). However, thus far this domain appears applicable only to PTG in the context of illness.

Despite advancements in quantitative measurement (e.g., the PTGI) that have allowed researchers to objectively assess SRG, qualitative investigations remain important due to the powerful narratives that often emerge from attempts to explore the lived experiences of those who perceive growth from adversity. For example, Sanghee and Youngkill (2008) interviewed 15 adults who had suffered a severe spinal cord injury due to incidents such as a car accident, gunshot wound, or a fall. The authors found that despite being physically incapacitated, the participants noted having more meaningful family relationships, feeling more engaged with daily activities, and having a greater appreciation for life.

In an effort to synthesize the qualitative literature on growth following life threatening illness, Hefferon et al. (2009) reviewed 57 studies published between 1999 and 2007. Their review revealed four themes: (a) reappraisal of life and priorities, (b) trauma equals development of self, (c) existential re-evaluation, and (d) awareness of the body. Whereas the first three themes closely parallel Tedeschi and Calhoun's (2004, 2006) domains of growth previously mentioned, the fourth theme represented a unique finding. Indeed, a qualitative study of 10 breast cancer survivors revealed that the body was vital for the growth process (Hefferon, Grealy, & Mutrie, 2010). Relatedly, participation in physical activity programs have been shown to promote psychological growth in part through the physical health benefits attained (Hefferon, Grealy, & Mutrie, 2008). In another study, Sabiston, McDonough, and Crocker (2007) conducted interviews with 20breast cancer survivors who participated in a dragon boat program. The findings supported Tedeschi and Calhoun's dimensions of growth, as the women noted positive growth through closer relationships, new possibilities, psychological strength, and appreciation for life. The latter studies are evidence of a connection between the body, physical activity and SRG.

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Preliminary evidence for SRG in sport and physical activity

Researchers have recently made notice of the relationship between growth and physical activity in cancer survivors (Burke & Sabiston, 2010; Hefferon, Grealy, & Mutrie, 2008; Love & Sabiston, 2011; Sabiston, McDonough, & Crocker, 2007). Specifically, the evidence suggests that physical activity participation facilitates positive psychosocial growth in cancer survivors by allowing them to gain a sense of control, embrace life, develop new identities, and overcome physical challenges.

Although few studies have systematically explored SRG in the context of competitive sport, the findings of some studies in the psychology of injury literature suggest that SRG is a potentially fruitful line of inquiry for sport scholars. Udry, Gould, Bridges, and Beck (1997) were perhaps the first researchers to uncover the positive psychological benefits of sport-related stress when they interviewed 21 skiers who had suffered season-ending injuries. Although the skiers did discuss feelings of frustration and worry, twenty of the skiers noted positive benefits of being injured. The benefits noted by the skiers included increased maturity, a greater appreciation for the "little things," and better time management.

Podlog and Eklund (2006) conducted a longitudinal investigation of athletes' return to sport from an injury. Twelve injured athletes were interviewed 2-3 times each over an 8-month period in order to explore their experiences from the time that they resumed training with teammates until 6 to 8 months postreturn. Similar to the Udry et al. (1997) study, Podlog and Eklund found that 10 of the 12 athletes identified benefits to their injury. Upon returning to competition, positive consequences such as having a new perspective on sport and a renewed passion for playing were noted by several of the athletes.

More recently, Wadey, Evans, Evans, and Mitchell (2011) conducted a qualitative exploration of perceived benefits in 10 rugby, soccer, and basketball players who sustained lower limb injuries lasting from two to 27 months. What resulted were causal networks

indicating the process of perceiving benefits related to injury onset, rehabilitation, and return to competition. For example, the participants noted that the onset of their injury was incapacitating, and required them to mobilize their social support, resulting in the perceived benefit of a strengthened social network. The athletes noted that the rehabilitation process resulted in an inability to train and compete, giving them the chance to assist their coach, and resulting in the perceived benefit of better tactical/technical awareness. This study provided the most comprehensive view of positive growth from sport adversity to date, and highlighted the need for further in-depth investigations of SRG in athletes.

Study purpose

Although recent qualitative studies have shed light on the possibility of SRG in athletes, there is a need for more in-depth exploration of athletes' perceptions of growth following sport-related adversity. The use of a valid and reliable measure of SRG in conjunction with qualitative interviews would allow for a more complete study of athletes' growth experiences. Our aim was to purposefully select athletes who reported high SRG on a self-report measure for further in-depth qualitative study. We were most interested in answering the following questions: (a) What are athletes' experiences of potentially stressful events in sport? (b) In what ways does growth manifest as a result of sport-related stress? and (c) What personal, environmental, social mechanisms assist athletes' growth?

Method

Paradigm and Personal Background

An interpretivist paradigm guided the exploration of sport-induced SRG in the present study. From an interpretivist perspective, reality is a function of individual perspective. That is, reality is only "objective" to the extent that individuals experience, process, and label it as such (Sciarra, 1999). Thus, in order to understand the reality of SRG in athletes, the researcher engaged in discussions with the interviewees regarding the actual, real-life SRG experiences of athletes (Schwandt, 2000).

My (i.e., the principle investigator's) interest in SRG developed from personal experiences with stressors and challenges as a friend, a student, and an athlete. As an avid sports fan and participant, I have been fascinated with athletes who are able to successfully rebound from injury, illness, or slumps in performance. My own experiences with stress as an athlete serve to shape my assumptions about SRG in competitive athletes. Media portrayals of "resilient" athletes, and research on resilience and SRG add to my assumptions regarding the personal, environmental, and sociocultural antecedents and consequences of growth in athletes. I assume that research on stress, coping, and resilience in sport is generally aimed at performance issues as an outcome without accounting for the unique positive social, emotional, and spiritual outcomes that may occur due to adversity. Two theories of growth from adversity and one sport-specific conceptual model guide my perspective of SRG. The first theory is Tedeschi and Calhoun's (2004) Functional Descriptive Theory (FDT), in which adverse events are seen as "seismic events" that challenge individuals' assumptions about life, and result in ruminative activity that leads to growth. The second is Joseph and Linley's (2005) Organismic Valuing Theory, which posits that SRG occurs only in the context of an environment that provides individuals with the basic needs of competence, autonomy, and relatedness. Finally, Galli and Vealey's (2008) conceptual model of resilience was particularly influential, as this model illustrates a conceptually similar phenomenon (i.e., resilience) in athletes. Although neither of these theories/models served as the basis for the present study, all of them informed the study design and interpretation of the results.

Research Design

Within the framework of the interpretivist paradigm, a basic descriptive qualitative design was employed to explore SRG. Sandelowski (2000) described the basic descriptive qualitative design as one that involves the "comprehensive description of an event in the everyday terms of those events" (p. 336). In contrast to phenomenology or grounded theory

designs, in which researchers' interpretations go beyond mere descriptions of participants' experiences, basic descriptive designs are adopted when the goal is simply an increased understanding of a phenomenon. Although basic descriptive designs are not bound by the same philosophic traditions as other qualitative designs, researchers may combine elements of several qualitative designs in order to guide their data collection and analysis. (Caelli, Ray, & Mill, 2003; Sandelowski, 2000).

Despite the lack of a precise classification for basic descriptive designs, Caelli et al. (2003) argued that it remains important to take a rigorous approach to basic descriptive qualitative research. As such, they offered four requirements for researchers conducting basic qualitative research: (a) a declaration of their theoretical position and personal history, (b) congruence between their methodology and their method, (c) a clear articulation of their approach to rigor, and (d) an explanation of their analytic lens. The first and final requirements were addressed in the preceding section stating my paradigm and personal background. The second requirement deals with the appropriateness of the data collection method used in the present study (i.e., individual interviews) for the chosen methodology. The foundation of interpretivism is a methodology based on an understanding of meaning construction (Schwandt, 2000). Interviews are a common and effective method for studying individuals' actions, language, and experiences. The third requirement of rigor is addressed in the forthcoming section on trustworthiness.

Participants

Eleven athletes (*M* age = 20.82, *SD* = 1.67) who competed at the Division I level of the National Collegiate Athletic Association (NCAA) participated in the study. The sample consisted of more females (8) than males (3), and the participants reported competing in their sport for an average of 9.81 years (*SD* = 4.71). Participants were from three U.S. universities, and were drawn from a larger study of SRG in intercollegiate athletes. Athletes who

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competed at the Division I level of the NCAA were chosen based on evidence suggesting that they are at high risk for experiencing stress resulting from balancing school and sports, being stigmatized, and lacking control over their lives (e.g., Kimball & Freysinger, 2003; Simons, Bosworth, Fujita, & Jensen, 2007; Wilson & Pritchard, 2005). Further, college is a time when young adults experience advances in emotional, interpersonal, and identity development that might allow them to recognize the benefits of stress (Chickering & Reisser, 1993; Milam, Ritt-Olson, & Unger, 2004). Using group and individual interviews, Giacobbi, Lynn, Wetherington, Jenkins, Bodendorf, and Langley (2004) found that first-year female swimmers viewed the struggles of transitioning into intercollegiate sport as an opportunity for growth.

Criterion sampling was employed to select Athletes from the larger sample (N =299) for interviews. Criterion sampling is useful for gaining more in-depth information on a subset of cases that are of particular interest (Patton, 2002). In the case of the present study, athletes who reported at least a moderate degree of growth as measured by the PTGI (described in the following section) were cases of interest. Sample selection began with the athletes who scored closest to the maximum average of five on the PTGI, and continued with athletes whose average scores approached three. Less than half (129) of the athletes reported at least a moderate degree of SRG. Of these athletes, 43 (39 females and 4 males) agreed to be interviewed on the initial consent form. A mass e-mail was sent to all 43 athletes, and was followed up with e-mails and phone calls to individual participants.

Insert Table 1 Here

Measures

Upon ethical approval, all athletes in the larger study completed Tedeschi and Calhoun's (1996) Posttraumatic Growth Inventory (PTGI) to measure SRG. Despite the use of the term *posttraumatic* in the title of the instrument, the PTGI was deemed the most

appropriate measure in this case for several reasons. First, the scale was originally validated with college students who reported a range of negative life events, including bereavement, academic problems, relationship problems, and injuries/accidents (Tedeschi & Calhoun, 1996). Thus, not all of the participants in the initial validation of the PTGI necessarily experienced traumatic events, but instead stressors commonly associated with being a college student. It was expected that the student-athletes in the present study would be of a similar age as those in the initial PTGI validity study. It was further expected that the participants would report an array of stressors consistent with the experiences of college students in general, and student-athletes in particular (e.g., academic problems, injury, relationship problems). Furthermore, several researchers have since adopted the PTGI to measure growth following stressful, but non-traumatic events (e.g., Anderson & Lopez-Baez, 2008; growth over the course of a college semester; Weinrib, Rothrock, Johnsen, & Lutgendorf, 2006; moving to a new city). Second, the psychometric properties of the PTGI have been subjected to more scrutiny than any other measure of growth (see Anderson & Lopez-Baez, 2008; Brunet, McDonough, Hadd, Crocker, and Sabiston, 2010; Linley, Andrews, and Joseph, 2007). Finally, feedback from 10 intercollegiate athletes indicated that the items on the PTGI were less confusing and more applicable to their sport stress experiences than questions on other growth scales such as the Stress Related Growth Scale.

Items for the PTGI were developed based on individuals' experiences with traumatic life events. The PTGI contains 21 Likert-type items measured on a scale from 0 (*I did not experience this change as a result of my stressful event*) to 5 (*I experienced this change to a very great degree as a result of my stressful event*). Athletes answered items relative to their most difficult sport stressor over the past 3 years. A total PTGI score was created by summing the participants' responses for all items and dividing by the total number of items (i.e., 21). This procedure resulted in a possible minimum score of 0, and a possible maximum

score of 5. Although not relevant to the current investigation, scores for each of the five PTGI subscales were also generated and have been submitted elsewhere for publication.

Interview Guide

The adoption of a general interview guide ensured that all major concepts regarding SRG were addressed, while at the same time allowing participants the freedom to direct the course of the interview (Patton, 2002; Turner, 2010). Although the use of a quantitative assessment tool to select our sample may be seen to conflict with the assumptions of interpretivism, care was taken during the interview to ensure that the athletes were given a platform to voice their own perspective on SRG without being confined to the items and themes from the PTGI. Example questions on the interview guide included, "You identified (the stressor identified by the athlete in phase one) as your biggest sport stressor in the past three years. Can you describe this stressor to me?" and "In what ways, if any, do you feel that you have changed as a result of this stressor?"

Procedures

The athletes were briefed regarding the nature of the study prior to their interview. Each participant read and signed a statement of informed consent. A rapport was established by letting athletes know from the beginning why they were chosen as participants, and by making it clear that they were considered to be an important and interesting source of knowledge with regard to understanding SRG in sport. Following the briefing session, in-depth semi-structured interviews were conducted with each participant. A conceptual approach was taken, in which the purpose was to "chart the conceptual structure" of SRG in the athletes (Kvale, 2007, p. 71). Various types of questions were used (e.g., introducing, follow-up), and probes in order to best understand the experiences of participants (Kvale, 2007). Although the interview guide was useful for organizing the interviews, this guide was not rigidly followed, as the interviewee's responses helped to dictate the order and wording

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of questions (Creswell, 2007). The semi-structured approach allowed for the interview to flow as a conversation and for the interviewees feelings to guide the interview, but within the framework of an interview protocol that was predetermined (Kvale, 2007).

By creating a relationship where knowledge is understood to be "value-free," it was hoped that participants would feel comfortable in openly and honestly describing their experiences. Specifically, a value-free atmosphere was created by taking time to build rapport prior to the interview (e.g., asking questions, taking an interest in the athletes' lives outside of sport), making it clear that they may choose not to answer any question or may discontinue the interview at any time, and demonstrating good listening skills during the interview (i.e., eye contact, paraphrasing). During this time, The PI invited any questions, comments, or concerns that participants may have had regarding the interview. He also reminded participants that the interview would be audio recorded in order to best capture their perceptions. Each interview lasted 40-60 minutes.

A debriefing session took place following each interview. After a long discussion in which participants gave much of themselves, this was a time for them to receive something in return (Kvale, 2007). If participants were interested, the PI shared more detailed information regarding the study and how their experiences would be used to advance knowledge in sport studies.

Data analysis

A general inductive approach was used to analyze the transcripts. Inductive analysis involves "detailed readings of raw data in order to derive concepts, themes, or a model through interpretations made from the raw data by a researcher" (Thomas, 2006, p. 238). The purpose of the general inductive approach is threefold: (a) condense raw data into a brief summary format, (b) establish clear links between the research objectives and the summary findings derived from the data, and (c) develop a framework for the underlying structure of

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experiences that are evident in the data (Thomas, 2006). Although the general inductive approach shares many similarities with grounded theory, it differs in that less emphasis is placed on the development of a theory from the data. Since the primary purpose of the present study was not necessarily to generate a theory, but rather to better understand SRG from the athletes' perspective, the general inductive approach seemed to be a better fit than grounded theory.

In order to glean a firm grasp of the content and experiences discussed in each interview, the process of analysis began with a close reading of each interview transcript (Thomas, 2006). Next, codes were assigned to segments of text related to the study purpose and research questions. (Miles & Huberman, 1994). In this study, segments of text were coded that related to athletes' experiences with SRG, including personal characteristics, environmental resources, sociocultural influences, and indicators of growth. These codes were created either using the PI's own words, a process known as *in vivo coding* (Strauss & Corbin, 1998). Related codes were grouped to form initial lower order categories representing the words of the participants. In order to reduce overlap and redundancy, similar lower order categories were combined to form higher order categories. The higher order categories were more closely tied to the study purpose and research questions rather than the words of the participants (Thomas, 2006). Throughout the process of coding and categorizing, memos were used as a way to record thoughts, questions, and directions for further data collection. This process continued until the data was adequately summarized in four overarching dimensions.

Criteria adapted from Bowen (2008) were used to decide whether a category was adequately saturated. First, the category must have been reflected in more than 70% of the interviews (i.e., eight or more interviews). Although relying on numerical criteria alone to determine saturation undermines the epistemological assumptions of the study, this strategy

helped to ensure that each category contained sufficient depth. Further, the numerical criterion was used in conjunction with other, more subjective criteria. Second, the category must have been confirmed in participant checks with the athletes. Finally, the category must have made sense given prior research on SRG and/or the stress experiences of competitive athletes.

Trustworthiness

Trustworthiness techniques were selected relative to the purpose of the study (Sparkes & Smith, 2009). Because the purpose was to explore athletes' perceptions of growth following adversity, trustworthiness techniques focused on ensuring that: (a) the participants' experiences aligned with the researcher's interpretations, and (b) the researcher's biases and predispositions regarding SRG in sport were made clear. To address the former point, participant checks were employed to make certain that the researcher's interpretations represented an honest and accurate portrayal of the athletes' experiences. Participant checks took place over e-mail, during which time participants were provided with a copy of their interview transcript, and the final categories derived from all interviews, and asked to check for any discrepancies between their experiences and my interpretations. No such discrepancies were noted by the participants. Three techniques were employed to monitor the researchers' biases and predispositions. First, he regularly noted his thoughts and struggles in a self-reflective journal. Journaling helped increase awareness of his personal values and assumptions regarding the research process and the athletes' perceptions (Ortlipp, 2008). Second, he participated with colleagues in a peer research team. Members of the team acted as an external audit by examining the process and the product of the study (Creswell, 1998). Further, this team frequently played the role of "devil's advocate" as the researcher finalized his categories and model. Finally, triangulation of analysts was used, as one member of the research team independently created a set of categories that best described the data from her

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perspective (Patton, 2002). Analyst triangulation was deemed important to reduce potential bias that might have resulted from a single-person analysis of the data. The categories created by the two researchers were compared as a check of the dependability of the results. Although no major discrepancies existed between the two researchers' interpretation of the categories, there were some instances in which the independent coder had an alternative conceptualization of the names and hierarchy of categories. When discrepancies occurred, the primary researcher returned to the raw data and re-considered his initial conclusions.

Results

The interviews were transcribed producing 168 pages of text, and 723 segments of text were coded and combined to form 11 lower and 8 higher order categories. The categories coalesced into four general dimensions detailing the SRG experience of the athletes. The dimensions were: (a) personal and sociocultural context (a stand-alone dimension); (b) disruption, which included the sub-categories of *struggles* and *working through*; (c) social support (a stand-alone dimension); and (d) positive psychosocial outcomes, which included the sub-categories of *emotional rebound*, *personal growth*, and *positive reflections*.

The final lower and categories and dimensions were used to create a conceptual model illustrating intercollegiate athletes' perceptions of SRG in response to sport stressors (see Figure 1). Athletes' struggles and attempts to work through their most difficult sport stressor led them to perceive personal growth in the form of a new life philosophy, self changes, and interpersonal changes. Social support was critical in facilitating athletes' attempts to work through and make meaning from their stressor. The entire SRG process was framed by athletes' life context, including personal characteristics and sociocultural conditions. The model formed out of the relationships evident in the stories of the participants. Although not a theory of SRG, the model is useful for discerning how the final categories seemed to relate to one another, and serves as a starting point for the future

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development of SRG theory in sport (Botha, 1989). In the following sections, appropriate quotes are used to illustrate each of the dimensions and categories.

Insert Figure 1 Here

Personal and Sociocultural Context

The life experiences and personal characteristics of the athletes framed their stress experiences. The athletes discussed cultural, familial, and personal factors that influenced their stress response. Leyla, a 22 year-old gymnast, revealed how her Korean culture had a strong impact on her beliefs about seeking help upon realizing that she suffered from depression:

> after I accepted that I needed help which was really hard for me because I was raised [in] the Korean culture and I was taught that even though you're sad you're supposed to act like you're not . . . but- you know I just accepted that I was different.

Several of the athletes believed that their personal character was shaped through family difficulties experienced earlier in life. Frank, a 22 year-old cross-country runner, discussed how his family situation played a vital role in his personal development: "I've had to work for everything that I've ever had. I mean I haven't been handed everything on a silver plate. My parents are divorced I've been the man of the house pretty much since."

Disruption

With their personal and sociocultural context as a backdrop, all of the athletes noted a particular stressor that they had experienced in sport in the past 3 years. As shown in the model, what emerged from the interviews was a cycle of disruption characterized by struggles and attempts to work through the stressor.

struggles. The athletes' struggles were the result of both the overall difficult nature of their stressor, and a wide variety of negative feelings triggered by the stressor. The label "hard" was chosen to describe the former, as every athlete used this term when discussing

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their stress experience. For example, Olga, a 20 year-old swimmer, noted that it was "Hard to find time to balance her school work, be a swimmer, and at the same time maintain her relationships with old friends." She also said that it was "Just really hard to think positive sometimes . . . especially in the down moments [when] you just want to give up." When talking about having to sit out during practice as the result of a shoulder injury, Blakely, a 21 year-old softball player, said:

> sitting and watching everyone playing . . . it sucked. And I just sat on the sidelines- it was just during fall ball though so it really wasn't that bad but it still sucked because people were practicing your position just in case you didn't come back.

Debilitative mental and physical consequences were discussed by several athletes. Perhaps as a result of the stress of balancing work and track, Ryan, a 22 year-old track athlete, suffered negative physical symptoms:

> I've been getting a lot of extremely severe headaches the past several months and the doctor got MRI scans . . . they're not sure what's wrong. We're not sure if they're a migraine problem because my father has migraines, or if they're stress related. One time it was so severe that I couldn't drive anymore.

working through. As the athletes struggled with the disruption caused by their stressor, they relied on facilitative personal qualities as well as active efforts to overcome the stress. Several of the athletes discussed maintaining a positive mentality as an important part of negotiating their stress. Janet, a 23 year-old track athlete, addressed being positive: "When I have a hard time, then after the hard time, I just sit back and see 'what did I gain from it, what did I learn?'" Olga developed her own distinctly positive philosophy for handling stress as a Division I athlete:

> I developed a little philosophy about college swimming: The first thing I need to do is to learn how to do hard things because you're always going to encounter them in life. You need to learn how to do hard things. The second one is to enjoy doing hard things. Because you know sometimes hard things will happen or come but you've got to try and enjoy it because you can either be sad or happy. And the third one is a lot harder. I'm still working on the third one. Try to enjoy doing hard things and try to help others enjoy doing hard things.

Being motivated to overcome their stressor was another personal quality that emerged from the interviews. Leyla was passionate about gymnastics: "If I love something I'm going to love it with all my heart I love it with every single part of my body and my mind." Charlot talked about being determined: "I had my best season last year but I think it was because I pushed . . . I am really a determined person so I pushed through it."

Being motivated influenced the types of coping strategies that the athletes chose to manage their stressor. Some of the athletes compared their situation to others as a way to alleviate their stress. Norah, an 18 year-old track athlete, talked about self comparison: "Just looking at the other accomplishments that I've had you know? So the end of senior year I was senior class president . . . I was able to look at that 'Oh yeah well like you know I was able to accomplish this.'" Haley chose a more spiritual comparison: "I really like the idea that whatever pain you go through now . . . you can't imagine what Jesus did. So I sit there and I go 'Ok if this is what I'm going through somebody else went through a lot worse.'" Charlot described how she kept herself positive:

> I think the thing that helped me a lot was keeping a gratitude journal . . . even if I couldn't think of one thing to be grateful for I would think of something in nature or something even if it was just one thing and as I kept doing this every day I would do this every day and every morning and as I kept doing this.

Social Support

The cycle of disruption was supported by family, friends, teammates, and coaches. Supportive others were cited as having a considerable impact on athletes' ability to successfully manage and achieve growth from their stress. Family was mentioned by most of the athletes as a key source of support. Olga talked about her parents: "Especially when it was really rough I just wanted to talk you know? Talking with my Mom and Dad just made me realize 'Ok I am learning something from this.'" Leyla felt a less direct but still powerful form of support from her sister:

> In the past few years I've felt a burden on me and expectations because I was never there for my sister. Like physically I couldn't be there to live with her and to show her how to drive or whatever and I kind of . . . felt like that was my fault and I only see her twice a year and she's growing up and she's going to go to college and I'm never going to get to see her but I feel like by her being so strong that way that she gives me strength mentally and if I'm in gym and I'm mentally weak and I'll be like "do this for your sister." And I'm able to.

Positive Psychosocial Outcomes

The final stage of the model depicts the product of athletes' cycle of struggling and working through their stressor. The positive psychosocial outcomes dimension is comprised of three higher order categories: (a) emotional rebound, (b) personal growth, and (c) positive reflections.

emotional rebound. Most of the athletes expressed feeling emotionally "better," or happier as compared to the time period during their disruption. Janet also became happier upon arriving at her new school and becoming a sprinter once again: "Now since I'm here I'm a little bit [happier] because I'm doing what I want." Haley was more illustrative in

discussing her present situation: "Things started looking up and you got one foot moving and you start getting out of the place and . . . it's now shining. It's awesome."

personal growth. Because the athletes in this study were chosen on the basis of having high scores on the PTGI, it is not surprising that personal growth emerged as one of the positive psychosocial outcomes of their stress experience. Growth manifested in three ways: (a) new life philosophy, (b) self changes, and (c) interpersonal changes. Each of these categories is addressed in the following sections.

new life philosophy. Perhaps the most profound domain of personal growth discussed by the athletes related to a new way of viewing life and sport. All of the athletes discussed either an increased appreciation for life, increased spirituality, or a changed perspective on life/sport due to their stressor.

increased appreciation. Many of the athletes believed that they had gained a greater appreciation for people, sport opportunities, and even the simple things in life as a result of their stressor. Haley reflected on the support she received: "It's one of those things where I looked back at it a few weeks ago and I was just thinking about it going 'Wow, you know everyone really did care that much.'" Other athletes discussed a newfound appreciation for their sport. Blakely experienced a renewed appreciation for softball after her injury:

> I could not imagine my life without softball . . . to have the opportunity to go play and it's kind of like "Why wouldn't I?" And there's only two more years left after my JC so . . . it made me find a new love for softball I guess you'd say and it's something I've been doing since I was like six so it's kind of like "What's two more years?" and I didn't know I was going to miss it that much just by being hurt.

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changed perspective on life/sport. Another part of the athletes' new philosophy on life was a changed perspective or outlook on what was important to them. A changed perception of sport was frequently mentioned. Charlot said:

> The thing that I learned the most from this was just that running isn't the only thing in my life that I'm good at or that I can progress in . . . but at the time I think I was weighing too heavily on running as the only thing I was good at so I was just constantly focusing on running and only running and not relationships and family and friendships and that sort of thing and then when all of the depression and anxiety set in I started to realize how important my family was and how important my friends are to my success . . . it's not all about "me, me, me" and my performance I guess so . . . that was the biggest awakening to me was just that running isn't the only thing in life.

increased spirituality. A final component of the athletes' new life philosophy was an improved relationship with God, and a stronger religious faith. Nearly all of the athletes noted enjoying spiritual benefits as a result of their experience. Many of the athletes' religious beliefs were affirmed based on the perception that they received assistance from a higher power during their struggles. Haley addressed her belief that God was on her side: "There was something else there in my opinion that helped me get strong enough to compete again and not lose the season." Ryan spoke about how he believed that someone was watching out for him during is busy year.

> Last semester I did school and track and then I worked nights on the weekends. And I (laughs) I never really realized until later I was thinking "how did I make it through that?" I mean that was insane. I didn't know what I was doing and I finally realized that I personally became closer to God. I felt as though he was

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more in my life because . . . honestly sometimes I do not remember driving from point 'a' to point 'b' (laughs).

Other athletes expressed a strengthened spiritual purpose because of their stressor. Olga talked about her spiritual awareness: "I've also realized that I'm a much stronger person than I thought I was spiritual-wise and just finding out that I do have the strength to stand up for what I believe in and say 'This isn't right.'" Haley felt the need to spread her faith to others:

I feel like I need to be a vessel for God in some aspects and we've been going to church together and kind of growing not only physically together but also spiritually and obviously emotionally since we go through the pr's and all the good things you do and the meets where you just do horrible.

self changes. In addition to a new life philosophy, a second area of personal growth for the athletes related to perceived changes in their attitudes, life skills, coping strategies, and ability to handle adversity. The self changes category is comprised of two lower order categories: (a) increased personal strength and (b) better life/sport functioning.

increased personal strength. Many of the athletes believed that they had become mentally and emotionally stronger through their stressor . Blakely believed that she was "definitely stronger" from her injury experience. Leyla felt more confident that she could handle future struggles: "I'm a stronger person now, and I can deal with things, and I feel like I have more strength to have faith, to know that I'll be ok." Nicole, a 19 year-old swimmer, similarly stated: "I can deal with things better than before . . . a bad experience I won't totally freak out and think I'm totally lost. I guess I know how to deal with stuff better." Norah felt improved because of her stress: "I feel like I'm a better athlete and better able to get over these obstacles that I didn't think I would able to get through at the beginning of the day." Frank discussed being a stronger competitor:

I felt like if it came down to the last 100 meters I could destroy anybody because I knew that I was strong. And that came to a lot of times in the races where it came down to that, and really that's what helped me.

better life/sport functioning. In addition to feeling stronger, the athletes discussed gaining new coping skills, having a better attitude, and being more responsible as a result of their stressor. Norah learned a new competitive coping strategy: "When it came down to it was just me against myself and then instead of me against all the other girls and so if I was able to understand that and then control that stress then I'd be able to do better."

Blakely discussed changes in the way that she viewed her body: "I've gotten a lot more patient with things and more intuitive with my body and listening to it rather than 'Oh that's not going to happen to me I'll be fine' and 'It happens to other people but not me.'"

interpersonal changes. The final area of growth identified by the athletes was interpersonal growth. The athletes believed that their relationships with important others had changed in positive ways as a result of their stressor. The interpersonal changes category contains two lower order categories: (a) changed relationships and (b) increased sense of altruism.

changed relationships. For all of the athletes, stressors presented the opportunity to establish closer connections with others. Because of her injury, Blakely filled a new role on her team: "I had to become more of a vocal leader I guess, kind of emotional- get to know my teammates more because I had nothing else to do. It did help me become a better teammate." Olga felt closer to her teammates due to their intense training regimen: "Especially with your teammates you grew a lot closer through that- you live through pretty terrible things together and that helps you. Just going through hard things together usually makes people grow closer."

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increased sense of altruism. A separate but related interpersonal change discussed by the athletes was an increased drive to help others. Frank believed that his injury was actually beneficial for others:

> I went to Brazil for the two years and seeing those people and helping them you know I don't know if I left early on my mission that I would have and so who knows what would have happened if I would have ran a little bit longer if I would have gone to the same place- you don't know.

Charlot expressed a desire to make a career out of helping others:

> I've been studying exercise science but what I really want to do is be a recreational therapist and work with girls on developing their worth. That's a huge thing. And I want to be a motivational speaker for juvenile delinquents. I really want to just let people know that they can change their life at any time.

positive *r*eflections. The final psychosocial outcome that emerged from the interviews represents athletes' thoughts on the overall significance of their stressor. Not surprisingly, most of the athletes had positive reflections on their experience. Haley said: "It's been a really a good experience even though at the time it wasn't real pleasant." Leyla reflected on the importance of her experience: "I'm more educated. Not by books, but by life, and my feelings, and things- I think that sometimes are more important than what we learn in school." Norah commented on her stressful event: "I just I thought it was really cool that this physical experience could help in other areas. You know I feel like I've just really grown spiritually and emotionally." Several of the athletes made a point to say that they would not change anything about their experience. Joe said: "I wouldn't change it for anything even thought it was probably the hardest thing that I've ever gone through, and hopefully the hardest thing that I ever will go through. But I wouldn't change one thing about it."

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Discussion

What are Athletes' Experiences of Stressful Times/Events in Sport?

Because SRG cannot occur in the absence of some stressful stimuli, it was important to first gain a sense for the athletes' stress experience. The stressors identified by the athletes as their most difficult in the past 3 years were consistent with previous literature on sources of stress in college athletes (Giacobbi et al., 2004; Tracey & Cortlett, 1995; Wilson & Pritchard, 2005). The athletes cited both acute stressors such as injury, and chronic stressors such as performance expectations as being their most stressful. Despite the variety of stressors discussed by the athletes, an overarching process emerged in the form of disruption and social support.

The conceptual model of SRG in athletes generated from this study is similar to other models of growth and resilience. First, the disruption cycle shown in the model is similar to other models of resilience and SRG (see Galli & Vealey, 2008; Richardson, 2002; Tedeschi & Calhoun, 2004). All of these models describe the occurrence of a stressor as a "disruption" or "seismic event" that serves to send individuals into a state of biopsychospiritual disarray. Second, similar to the findings of Galli and Vealey (2008), the disruption of the athletes in this study was characterized by a cycle of "agitation," as athletes struggling and attempted to work through the stressor. The athletes noted how "hard" the stressor was on them physically, mentally, and emotionally, as well as their attempts to combat the stressor by having a positive attitude, being motivated, and actively coping. Finally, as in other models of growth and resilience, social support plays a critical role in facilitating the SRG process in the present model (e.g., Galli & Vealey, 2008; Joseph & Linley, 2005; Tedeschi & Calhoun, 2004).

Despite similarities between the model generated from this study and other models of growth and resilience, some important differences exist. First, as compared to Tedeschi and

Calhoun's (2004) FDT, the athletes in this study reported much less rumination regarding their situation. Tedeschi and Calhoun's (2004) FDT details the process of PTG rather than SRG. It may be that the stressors experienced by the athletes in the present study, while significant enough to produce SRG, were not sufficiently traumatic to result in the automatic and deliberate rumination characteristic of PTG. Second, the present model differs from FDT in that more emphasis is placed on the athletes' sociocultural context (i.e., race, gender, class). Although Tedeschi and Calhoun (2004) do make note of the "person pretrauma" in their model, this appears to refer to the person's psychological makeup as opposed to their social world. Individuals' race, ethnicity, gender, social class, among other social issues seem important to consider when attempting to explain growth from adversity. The model is most similar to Galli and Vealey's (2008) resilience model. The major difference between the models is that the positive psychosocial outcomes in the present model of SRG are much more refined. The increased sophistication of the outcomes is likely a result of the greater focus on SRG in the present study, and the use of the PTGI for participant selection. Nevertheless, the models do share a substantial amount of overlap. The high degree of similarity is likely in part due to the personal background of the authors previously described. However, the congruence between the findings in the two studies also seems to lend support for a multifaceted process of positive change due to sport stress and adversity. The similarity of the models makes conceptual sense, as growth and change from adversity has been suggested as one form of resilience (e.g., Lepore & Revenson, 2006; Morland, Butler, & Leskin, 2008).

In What Ways Does Growth Manifest?

The findings confirmed the results of the PTGI in that the athletes perceived high levels of personal growth as a result of their stressor. The identified areas of growth (i.e., new life philosophy, self changes, and interpersonal changes) are all strongly supported in the

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SRG literature (Calhoun & Tedeschi, 2006; Sanghee & Youngkill, 2008; Woodward & Joseph, 2003). Although prior research has provided preliminary evidence that many athletes do perceive positive change in response to sport adversity (e.g., Galli & Vealey, 2008; Podlog & Eklund, 2006; Udry et al., 1997), this study adds breadth to our understanding of the particular ways that athletes achieve personal growth. Similar to Wadey et al. (2011), the athletes in this study noted positive changes that extended beyond sport, including improved relationships with family, and increased spirituality.

The athletes revealed areas of growth that are not often included in traditional conceptions of SRG, and that were not directly measured on the PTGI. First, they believed that they were generally more responsible and more effective in activities of daily living than before their stressor. The finding of improved life functioning may in part be explained by the developmental challenges with which most of the athletes were negotiating. The late teens and early 20s are a time when individuals are attempting to develop their identity, become independent, and form intimate relationships (Erikson, 1950; Santrock, 1999). Thus, as opposed to the more mature individuals who are often studied in SRG research, it would seem that individuals who are transitioning from adolescence to young adulthood are ripe for experiencing SRG related to having better time management, being more responsible, and gaining better academic/occupational skills.

The second nontraditional area of growth discussed by the athletes was altruism. Although relationship changes are a core domain of SRG, altruism and altruistic acts are not commonly reported by individuals in studies of growth. Calhoun and Tedeschi (2006) noted that although an increase in compassion for others is often reported in conjunction with growth, there is no empirical evidence suggesting that it translates into altruistic acts. The team environment surrounding college athletes may encourage them to put their newfound compassion into action, especially by serving as mentors for younger team members.

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What Mechanisms Assist Athletes' Perceptions of Positive Growth?

Perhaps the most difficult, but most important question to answer about SRG is "how does it happen?" Taken together with previous research, the results do offer some insight into the variables that play a key role in the occurrence of SRG. Athletes' previous background and struggles were discussed as shaping their character, and preparing them to successfully manage the stressor that was the focus of this study. In support of Galli and Vealey (2008), prior cultural, familial, and sport struggles were viewed as growth producing experiences in themselves. This finding underscores the importance of considering the personal and sociocultural context for SRG. Perceptions of no or low growth by athletes following stressors should not be taken as a personal "problem," but rather as a product of years of interactions between individuals and the sociocultural systems within which they operate.

Many of the athletes interviewed self-identified as being positive or optimistic in general. Both optimism and positive affect have been shown to relate to SRG (Dunn, Occhipinti, Campbell, Ferguson, & Chambers, 2011; Park, Aldwin, Fenster, & Snyder, 2008). Optimists may be more likely to appraise stressful events as challenges, and engage in approach coping strategies such as positive reappraisal (Nes & Segerstrom, 2006; Tedeschi & Calhoun, 2004). Indeed, the athletes did report using a number of approach-type coping strategies such as seeking social support and positively reinterpreting the stressor.

Coping efforts were another critical piece of the athletes' experience. As discussed previously, the athletes discussed using a variety of coping strategies to handle their stressors. Positive reappraisal and religious-based coping strategies such as prayer were most notable among the strategies employed. The use of positive reappraisal by the athletes to reinterpret their stressors was not surprising, given the strong evidence of reinterpretation coping and SRG as separate, but highly related constructs (Bussell & Naus, 2010; Park et al., 1996).

Being able to find the "good" in the "bad" may be an important preliminary step in actually achieving growth.

Relying on religious practices to cope with stressors was common among the athletes. Using religious coping strategies such as seeking religious support has been related to growth in college students (e.g., Gerber, Boals, & Schuettler, 2011). Religiousness and spirituality have been suggested to provide an impetus for SRG through two mechanisms: (a) as a result of the social support that may come from being a member of a given religion, and (b) as a result of the intrinsic sense of meaning, purpose, and coherence that religion provides (Shaw, Joseph, & Linley, 2005). Indeed, the athletes were often able to perceive meaning in their stress through their relationship with God, and take solace that a higher power was watching over them and guiding them as they worked through their stress. Sport researchers interested in the link between spirituality and athletes' sport experience would be wise to consider SRG as a potential outcome of the stress and coping process.

The results of this study suggest that athletes' personal and sociocultural life experiences, having a positive disposition, and engaging in approach-type coping strategies are mechanisms through which growth occurs. It is likely that these factors work together to facilitate SRG. Indeed, previous research has shown strong support for a model of growth that features coping as a mediator between personality, appraisals, and SRG (Park & Fenster, 2004). SRG would seem to be a valuable addition to the growing body of literature on stress and coping in sport, as most researchers have focused on coping effectiveness as the alleviation of negative emotions, rather than coping effectiveness as an impetus for emotional growth (Nicholls & Polman, 2007).

Limitations and Future Directions

Despite the insights gained into the positive outcomes of stress in Division I athletes, this investigation suffered from some limitations. Specifically, the retrospective nature of the

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interviews limits our ability to fully understand the athletes' process of growth. Ideally each athlete would have been interviewed at multiple points before, during, and after the occurrence of their stressor so as to obtain "real-time" accounts of their experience rather than a post-stressor "snapshot." Another limitation of this study was the somewhat narrow focus on a single stressor. Indeed, athletes are bombarded by significant life events, both positive and negative. These events often occur simultaneously, thus it may be overly simplistic to attribute positive outcomes to a single stressor.

Although the study of growth from adversity has blossomed in general psychology, many questions remain about the nature of growth in the sporting context. The conceptual model developed from this study can be used as a starting point for researchers who wish to examine the pathways for growth prospectively, and/or study SRG in specific subgroups of athletes. Longitudinal designs should be employed to demonstrate the temporal course of growth. Given that the athletes' sociocultural context emerged as an important part of their growth experience, researchers should account for the influence of relevant sociocultural issues when studying SRG. Finally, alternative qualitative approaches such as grounded theory, phenomenology, and narrative analysis should be adopted, as these designs will allow researchers to test the veracity of the model proposed in this study, as well as generate new ideas about the nature of SRG in sport.

Applied Implications

For sport psychology practitioners, the results of this study provide insight into another possible outcome of stressors for athletes. By having an understanding of the antecedents and facilitating factors for SRG, practitioners can increase the likelihood that athletes grow and learn from sport and non-sport stressors. Based on the proposed model, some specific recommendations can be made. Practitioners can promote approach-focused coping strategies in which athletes engage in active efforts to manage their emotions and

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solve problems. Such strategies may include journaling, recalling past successes, or seeking social support. Since social support seemed to facilitate the process of working through, practitioners should assist athletes in developing their support network, and encourage them to seek social support from trusted family, friends, coaches, and teammates.

Conclusion

The purpose of this study was to explore Division I NCAA athletes' perceptions of positive growth from sport stressors and adversity. The results of interviews with 11 athletes revealed that growth is a dynamic and multifaceted process emanating from their personal and sociocultural context, personal struggles, coping, and social support. The conceptual model presented in this article should be taken as a guide for future investigations of SRG in athletes. From a quantitative perspective, longitudinal investigations should be conducted which test the relationship between multiple theoretically relevant variables and SRG in the context of specific sport stressors (e.g., injury). Further qualitative research, either in conjunction with such quantitative studies, or as independent projects, are necessary to learn more about the growth experience from athletes' perspective. Engaging with the study of SRG in sport from multiple paradigms and using diverse methods will add significantly to the knowledge base in this new area of inquiry. More importantly, research findings will assist practitioners' efforts to support SRG in athletes so that they, like John Wooden and Lance Armstrong before them, can realize benefits from the many sport and life stressors they are likely to encounter.

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References

Anderson, W. P., Jr., & Lopez-Baez, S. I. (2008). Measuring growth with the posttraumatic growth inventory. *Measurement and Evaluation in Counseling and Development, 40*(4), 215-227.

Armstrong, L. (2001). Back in the saddle. *Forbes, 168,* 64-64.

Botha, M. E. (1989). Theory development in perspective: the role of conceptual frameworks and models in theory development. *Journal of Advanced Nursing, 14*(1), 49-55.

Bowen, G. A. (2008). Naturalistic inquiry and the saturation concept: A research note. *Qualitative Research, 8*(1), 137-152.

Bowker, G. C., & Star, S. L. (2000). *Sorting things out: Classification and its consequences.* Cambridge, MA: MIT Press.

Brunet, J., McDonough, M. H., Hadd, V., Crocker, P. R. E., & Sabiston, C. M. (2010). The Posttraumatic Growth Inventory: An examination of the factor structure and invariance among breast cancer survivors. *Psycho-Oncology, 19*(8), 830-838.

Burke, S. M., & Sabiston, C. M. (2010). The meaning of the mountain: Exploring breast cancer survivors' lived experiences of subjective well-being during a climb on Mt. Kilimanjaro. *Qualitative Research in Sport & Exercise, 2*(1), 1-16.

Cadell, S., Regehr, C., & Hemsworth, D. (2003). Factors contributing to posttraumatic growth: A proposed structural equation model. *American Journal of Orthopsychiatry, 73*(3), 279-287.

Caelli, K., Ray, L., & Mill, J. (2003). 'Clear as mud': Toward greater clarity in generic qualitative research. *International Journal of Qualitative Methods*, *2*(2), 1-24.

Calhoun, L.G., & Tedeschi, R.G. (1999). *Facilitating posttraumatic growth: A clinician's guide.* Mahwah, NJ: Lawrence Erlbaum.

Calhoun, L. G. & Tedeschi, R. G. (2006). The foundations of posttraumatic growth: An expanded framework. In L. G. Calhoun & R. G. Tedeschi (Eds.), *Handbook of posttraumatic growth: Research and practice (*pp. 3-21). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Chickering, A. W., & Reisser, L. (1993). *Education and identity (2nd ed.).* Hoboken, NJ: Jossey-Bass.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage Publications.

Dunn, J., Occhipinti, S., Campbell, A., Ferguson, M., & Chambers, S. K. (2011). Benefit finding after cancer: The role of optimism, intrusive thinking and social environment. *Journal of Health Psychology, 16*(1), 169-177.

Erikson, E. H. (1950). Growth and crises of the 'healthy personality.'. In M. J. E. Senn (Ed.), *Symposium on the healthy personality.* (pp. 91-146). Oxford, England: Josiah Macy Jr. Foundation.

Frankl, V. E. (1963). *Man's search for meaning: an introduction to logotherapy.* Oxford, England: Washington Square Press.

Galli, N., & Vealey, R.S. (2008). "Bouncing back" from adversity: Athletes' resilience experiences. *The Sport Psychologist,* 22(3), 316-335.

Gerber, M. M., Boals, A., & Schuettler, D. (2011). The unique contributions of positive and negative religious coping to posttraumatic growth and PTSD. *Psychology of Religion and Spirituality*.

Giacobbi, P. R., Lynn, T. K., Wetherington, J. M., Jenkins, J., Bodendorf, M., & Langley, B. (2004). Stress and coping during the transition to university for first-year female athletes. *The Sport Psychologist, 18*(1), 1-20.

UU IR Author Manuscript

Hefferon, K., Grealy, M., & Mutrie, N. (2009). Post-traumatic growth and life threatening physical illness: A systematic review of the qualitative literature. *British Journal of Health Psychology, 14*(2), 343-378.

Hefferon, K., Grealy, M., & Mutrie, N. (2010). Transforming from cocoon to butterfly: The potential role of the body in the process of posttraumatic growth. *Journal of Humanistic Psychology, 50*(2), 224-247.

Joseph, S., & Linley, P. A. (2005). Positive Adjustment to Threatening Events: An Organismic Valuing Theory of Growth Through Adversity. *Review of General Psychology*, (3), 262-280.

Kimball, A., & Freysinger, V. J. (2003). Leisure, stress, and coping: The sport participation of collegiate student-athletes. *Leisure Sciences, 25*(2-3), 115-141.

Kvale, S. (2007). *Doing interviews.* Thousand Oaks, CA: Sage Publications.

Lepore, S. J., & Revenson, T. A. (2006). Resilience and posttraumatic growth: Recovery, resistance, and reconfiguration. In L. G. Calhoun, & R. G. Tedeschi (Eds.), *Handbook of posttraumatic growth: Research and practice* (pp. 24-46). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Love, C., & Sabiston, C. M. (2011). Exploring the links between physical activity and posttraumatic growth in young adult cancer survivors. *Psycho-Oncology, 20*(3), 278-286.

Malinak, D. P., Hoyt, M. F., & Patterson, V. (1979). Adults' reactions to the death of a parent: A preliminary study. *American Journal of Psychiatry, 136*(9), 1152-1156.

Merriam, S. B. (1998). *Qualitative research and case study applications in education.* San Francisco: Jossey-Bass.

Milam, J. (2006). Posttraumatic growth and HIV disease progression. *Journal of Consulting and Clinical Psychology, 74*(5), 817-827.

UU IR Author Manuscript

Milam, J. E., Ritt-Olson, A., & Unger, J. B. (2004). Posttraumatic Growth Among Adolescents. *Journal of Adolescent Research, 19*(2), 192-204.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook.* Thousand Oaks, CA: Sage Publications.

Morland, L. A., Butler, L. D., & Leskin, G. A. (2008). Resilience and thriving in a time of terrorism. In S. Joseph, & P. Alex Linley (Eds.), *Trauma, recovery, and growth: Positive psychological perspectives on posttraumatic stress (*pp. 39-62). Hoboken, NJ: John Wiley & Sons Inc.

Nes, L. S., & Segerstrom, S. C. (2006). Dispositional optimism and coping: A meta-analytic review. *Personality and Social Psychology Review, 10*(3), 235-251.

Nicholls, A. R., & Polman, R. C. J. (2007). Coping in sport: A systematic review. *Journal of Sports Sciences, 25*(1), 11-31.

Ortlipp, M. (2008). Keeping and using reflective journals in the qualitative research process. *Qualitative Report, 13*(4), 695-705.

Park, C. L. (2009). Overview of theoretical perspectives. In C. L. Park, S. C. Lechner, M. H. Antoni, & A. L. Stanton (Eds.), *Medical illness and positive life change: Can crisis lead to personal transformation? (*pp. 11-30). Washington: American Psychological Association.

Park, C. L., & Fenster, J. R. (2004). Stress-related growth: Predictors of occurrence and correlates with psychological adjustment. *Journal of Social & Clinical Psychology, 23* (2), 195-215.

Park, C. L., Aldwin, C. M., Fenster, J. R., & Snyder, L. B. (2008). Pathways to posttraumatic growth versus posttraumatic stress: Coping and emotional reactions following the September 11, 2001, terrorist attacks. *American Journal of Orthopsychiatry, 78*(3), 300-312.

UU IR Author Manuscript

Park, C. L., Cohen, L. H., & Murch, R. L. (1996). Assessment and prediction of stress-related growth. *Journal of Personality, 64*(1) , 71-105.

Parappully, J., Rosenbaum, R., van den Daele, L., & Nzewi, E. (2002). Thriving after trauma: The experience of parents of murdered children. *Journal of Humanistic Psychology, 42* (1), 33-70.

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Podlog, L., & Eklund, R. C. (2006). A longitudinal investigation of competitive athletes' return to sport following serious injury. *Journal of Applied Sport Psychology, 18*(1), 44-68.

Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*(3), 307-321.

Sabiston, C. M., McDonough, M. H., & Crocker, P. R. E. (2007). Psychosocial experiences of breast cancer survivors involved in a dragon boat program: Exploring links to positive psychological growth. *Journal of Sport & Exercise Psychology, 29*(4), 419-438.

Sandelowski, M. (2000). Focus on research methods. Whatever happened to qualitative description? *Research in Nursing & Health, 23*(4), 334-340.

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health, 33*(1), 77-84.

Sanghee, C., & Youngkhill, L. (2008). The experience of posttraumatic growth for people with spinal cord injury. *Qualitative Health Research, 18*(7), 877-890.

Santrock, J. W. (1999). *Life-span development* (7th ed.). New York, NY: McGraw-Hill.

Schwandt, T.A. (2000). Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructionism. In N.K. Denzin and Y.A. Lincoln (Eds.),

UU IR Author Manuscript

Handbook of qualitative research, (2nd ed., pp. 189-213). Thousand Oaks, CA: Sage Publications.

Sciarra, D. (1999). The role of the qualitative researcher. In M. Kopala, & L.A. Suzuki (Eds.), *Using qualitative methods in psychology* (pp. 37-48). Thousand Oaks, CA: Sage Publications.

Shaw, A., Joseph, S., & Linley, P. A. (2005). Religion, spirituality, and posttraumatic growth: A systematic review. *Mental Health, Religion, and Culture, 8*(1), 1-11.

Simons, H. D., Bosworth, C., Fujita, S., & Jensen, M. (2007). The athlete stigma in higher education. *College Student Journal, 41*(2), 251-273.

Sparkes, A. C. and B. Smith (2009). Judging the quality of qualitative inquiry: Criteriology and relativism in action. *Psychology of Sport and Exercise, 10*(5), 491-497.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory.* Thousand Oaks, CA: Sage Publications.

Tedeschi, R.G., & Calhoun, L.G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress, 9*(3), 455-472.

Tedeschi, R. G., & Calhoun, L. G. (2004). Target Article: 'Posttraumatic Growth: Conceptual Foundations and Empirical Evidence'. *Psychological Inquiry, 15*(1), 1-18.

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27*(2), 237-246.

Tracey, J., & Cortlett, J. (1995). The transition experience of first-year university track and field athletes. *Journal of the Freshman Year Experience, 7*(2), 82-102.

Turner, D. W. (2010). Qualitative research design: A practical guide for novice investigators. *The Qualitative Report, 15*(3).

Udry, E., Gould, D., Bridges, D., & Beck, L. (1997). Down but not out: Athlete responses to season-ending injuries. *Journal of Sport and Exercise Psychology, 19*(3), 229-248.

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Wadey, R., Evans, L., Evans, K., & Mitchell, I. (2011). Perceived benefits following sport injury: A qualitative examination of their antecedents and underlying mechanisms. *Journal of Applied Sport Psychology, 23*(2), 142-158.

Wilson, G., & Pritchard, M. (2005). Comparing sources of stress in college student athletes and non-athletes. *Athletic Insight: The Online Journal of Sport Psychology*, *7*(1), retrieved June 22, 2007 from gw3@evansville.edu http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2005-06237-002&site=ehost-live

Wooden, J., & Jamison, S. (2005). *Wooden on Leadership: How to create a winning organization.*

Woodward, C., & Joseph, S. (2003). Positive change processes and post-traumatic growth in people who have experienced childhood abuse: Understanding vehicles of change. *Psychology and Psychotherapy: Theory, Research and Practice, 76*(3), 267-283.

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